WHAT IS CLAIMED IS:

1.   A method comprising:

        receiving a frame of data;

        incrementing a frame counter; and

5   demodulating the frame of data based on a value of the frame counter.

2.   The method of claim 1 further comprising:

        if the demodulating fails, repeating the receiving, incrementing, and demodulating;

        if the demodulating succeeds,

10   decoding a frame of data associated with the demodulated frame of data; and

        resetting the frame counter.

3.   The method of claim 2, wherein if the demodulating succeeds, after the resetting the

method further comprises repeating the receiving, incrementing, and demodulating.

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4.   The method of claim 2, wherein the demodulated frame of data is a frame of control

channel data and the frame of data associated with the demodulated frame of data is a frame of

data channel data.

20 5.   The method of claim 2, wherein the frame counter is reset to zero.

6.   The method of claim 1, wherein the demodulating comprises:

if the value of the frame counter is equal to one,

i) demodulating the frame of data as a single slot format frame;

if the value of the frame counter is equal to two or three,

ii) demodulating the frame of data as a single and dual slot format frame;

and

if the value of the frame counter is greater than three;

iii) demodulating the frame of data as a single, dual, and quad slot format

frame.

7.   The method of claim 6, wherein the ii) demodulating comprises:

1) demodulating the frame of data as a single slot format frame; and

if the 1) demodulating fails,

2) demodulating the frame of data as a dual slot format frame.

8.   The method of claim 7, wherein the 2) demodulating demodulates the frame of data

and a frame of data received immediately prior to the frame of data.

9.   The method of claim 6, wherein the iii) demodulating comprises:

a) demodulating the frame of data as a single slot format frame;

if the a) demodulating fails,

b) demodulating the frame of data as a dual slot format frame; and

if the b) demodulating fails,

c) demodulating the frame of data as a quad slot format frame.

10.   The method of claim 9, wherein the b) demodulating demodulates the frame of data and a frame of data received immediately prior to the frame of data and the c) demodulating demodulates the frame of data and three frames of data received immediately prior to the frame of data.

11.   The method of claim 6, wherein there are two channels with each channel carrying a frame of data to be demodulated, and wherein a i), ii), or iii) demodulating of the frame of data at a specified slot format comprises:

testing if a first channel can be demodulated with the specified slot format;

if the first channel can be demodulated with the specified slot format,

testing if the first channel is intended for a current user;

decoding a frame of data associated with the demodulated frame of data if the first channel is intended for the current user;

if the first channel cannot be demodulated with the specified slot format,

testing if a second channel can be demodulated with the specified slot format if the first channel cannot be demodulated with the specified slot format;

if the second channel can be demodulated with the specified slot format,

testing if the second channel is intended for the current user;

testing again if the first channel can be demodulated with the specified

slot format; and

5   decoding a frame of data associated with the demodulated frame of data

on the second channel if the first channel can be demodulated with the specified slot format;

12.   The method of claim 1, wherein the frame of data is a frame of control channel data.

10   13.   The method of claim 12, wherein the frame of control channel data is carried on a

pair of forward-link packet data control channels (FPDCCH).

14.   A method for demodulating a control channel, wherein frames of data carried on the control channel may be formatted differently based on channel quality, the method comprising:

    determining a channel quality; and

    demodulating a frame of data based on the channel quality.

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15.   The method of claim 14, wherein the demodulating comprises:

    if the channel quality is high,

        demodulate the frame of data using a single slot frame format;

    if the channel quality is low,

10   demodulate the frame of data using a quad slot frame format; and

    if the channel quality is medium,

        demodulate the frame of data using a single, dual, and quad slot frame

format.

15 16.   The method of claim 14, wherein a frame of data on the control channel is associated with a frame of data on a data channel, and the method further comprises decoding a frame of data on the data channel associated with the frame of data on the control channel if the demodulation of the frame of data on the control channel succeeds.

20 17.   The method of claim 14, wherein the channel quality is periodically determined.

18.   The method of claim 14, wherein the channel quality is determined when performance of a device receiving the frames of data degrades below a predetermined threshold.

19.   A circuit comprising:

a buffer to hold a frame of data from a symbol stream;

a frame counter coupled to the buffer, the frame counter to count the number of frames of data held by the buffer since a last successfully demodulated frame of data; and

5   a demodulator coupled to the buffer and the frame counter, the demodulator containing circuitry to demodulate a frame of data using based on the count from the frame counter.

20.   The circuit of claim 19, wherein the buffer holds a frame of data from two control

10   channels.

21.   The circuit of claim 19, wherein the buffer holds a number of frames of data at least equal to a longest supported slot format.

22.   A wireless receiver comprising:

a radio frequency (RF) processing unit coupled to a signal input, the RF processing

unit containing circuitry to filter, amplify, and mix a signal provided by the signal input;

an analog-to-digital converter (ADC) coupled to the RF processing unit, the ADC to

5   convert the filtered, amplified, and mixed signal provided by the RF processing unit into a digital

symbol stream; and

a digital signal processing unit coupled to the ADC, the digital signal processing unit

containing circuitry to demodulate a frame of control data based on a count of a number of

frames of control data received since a last successfully demodulated frame of control data and

10   to decode a frame of data based on the demodulated frame of control data.

23.   The wireless receiver of claim 22, wherein the digital signal processing unit

comprises:

a demodulator coupled to the ADC, the demodulator comprising,

15   a buffer to hold the frame of control data;

a frame counter coupled to the buffer, the frame counter to count the number of

frame of control data held by the buffer since a last successfully demodulated frame of control

data;

a demodulator coupled to the buffer and the frame counter, the demodulator

20   containing circuitry to demodulate a frame of data using based on the count from the frame

counter; and

a decoder coupled to the demodulator, the decoder containing circuitry to decode the

frame of data based on the demodulated frame of control data.

24.   The wireless receiver of claim 22, wherein the wireless receiver is part of a wireless

device operating in wireless communications network.

25.   The wireless receiver of claim 24, wherein the wireless communications network is a

code-division multiple access (CDMA) compliant network.

26.   The wireless receiver of claim 25, wherein the CDMA compliant network is

CDMA2000 compliant.

27.   The wireless receiver of claim 25, wherein the CDMA compliant network is

Universal Mobile Telephone System (UMTS) compliant.